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PREMIERE ISSUE FEBRUARY 1988

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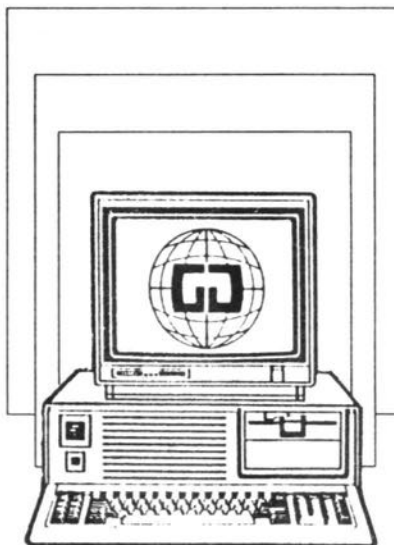
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THE COMPUTER PAPER

British Columbia's Computer Information Source

February 1988 PREMIERE ISSUE

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Welcome to The Computer Paper, our premiere edition.

We hope to fill the void in the Vancouver computing scene with an informative monthly tabloid focussing on the issues of the business computer community.

Our first issue's circulation is 30,000 and is being distributed FREE in the Vancouver area through computer related businesses, user group meetings, the library system, computer training centres, book stores, news stands and other cooperating outlets. The Computer Paper will also be distributed in locations with large computer installations.

We will be regularly including national, U.S. and Japanese coverage of current industry items from Wendy Wood's NEWSBYTES, the acclaimed computer - related wire service. In addition we intend to cover local industry events, products and companies. Look forward to computer related stories and features which affect and concern you on a local level.

If you are a budding computer writer looking for someplace to get published, or a consultant with a wealth of knowledge to share, THE COMPUTER PAPER needs high quality features and articles. An emphasis on the local market and Vancouver/B.C./ Canadian interest stories is what we want. Send an outline of your proposed article, or contact myself, Kirtan Singh at 733-5596.

We plan to carry a regular CALENDAR OF EVENTS. To ensure that your listing is carried, call and let us know about it. Note that these listings are FREE but we retains the right to edit them for content and length.

We look forward to serving the Vancouver and B.C. computer industry and public with THE COMPUTER PAPER and welcome any and all of your support in doing this.

Kirtan Singh Khalsa
Editor/ Publisher

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Contents

Departments

Wendy Wood's Newsbytes

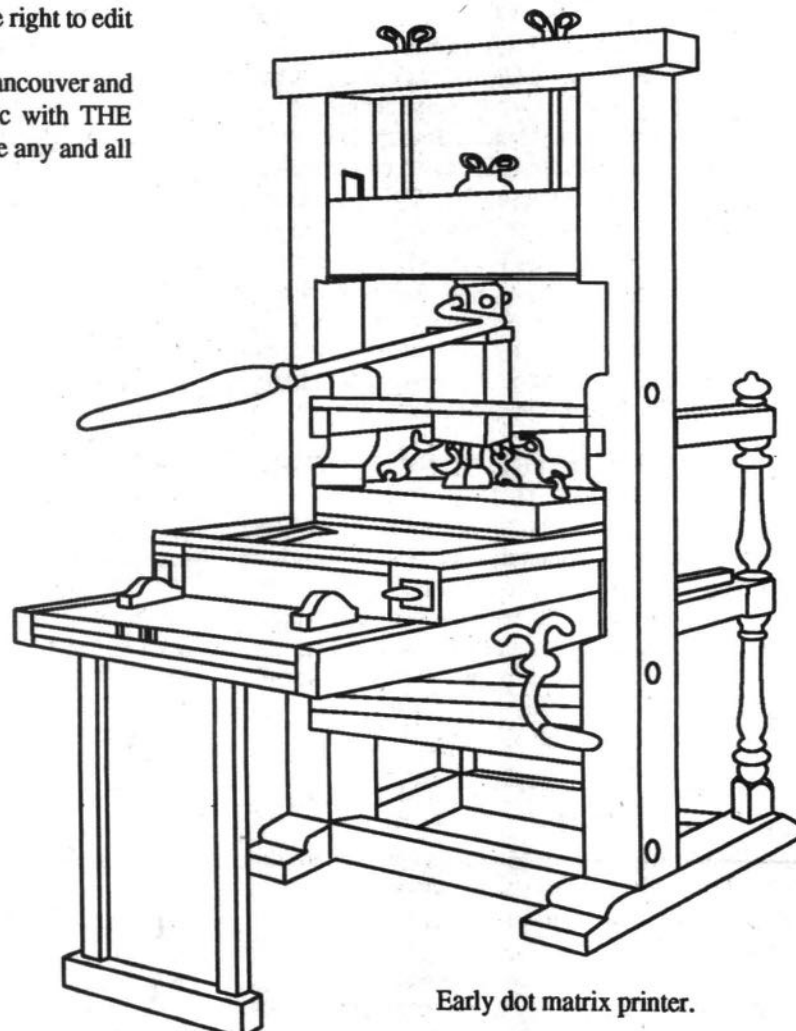
Canada	4
U.S.	4
Japan	7
The Markets	4
Computer Calendar	14
Classified Ad	15

Features

SIMPLY ACCOUNTING

Bedford on the Macintosh	8
Canadian Payroll Packages	10
MacWorld Report	12

Cover by Rosemary Anders



Early dot matrix printer.

NEWSBYTES

By Wendy Woods

PS/2 CLONE CHIP SET ANNOUNCED, FEW PUBLICLY LEAP TO GRAB IT

SAN JOSE, Ca. (NB) — Throwing caution to the winds, Chips and Technologies has followed Western Digital in a promise to ship sample sets of PS/2 chips to computer makers by February, and optimistically predicts that the first PS/2 computer clones could be ready for sale by this summer. At a New York news conference, Chips was accompanied by Adaptec, Phoenix Technologies, Microsoft, and Santa Cruz operations, all of whom said they can offer a complete package of hardware and software for PS/2 clone makers who wish to duplicate the functions of the IBM Model 50 and 60. Said Raj Jaswa, a Chips and Technologies marketing manager, "Now even the smallest garage in Taiwan can indeed put one together." Company officers also predicted they'll be shipping clone chip sets for the higher-end IBM Model 80 by May.

One crowning feature of the new chip set is its speed. Chips claims its PS/2 sets run 60% faster than IBM's. And Adaptec's hard disk controller will accommodate 570 million characters of storage while IBM's can only handle 20 million.

No computer manufacturers were present at the news conference, since they generally are taking a wait-and-see attitude. IBM has publicly warned that it will go to court to fight PS/2 clones. And Computer Automation of Irvine, California, also promises a court fight, saying its patent on the Micro Channel Architecture's "self configuring" feature cannot be bypassed by any clone-maker and all who dare to follow IBM's path will have to answer to their demand for a license. But to the IBM threat, at least, a Chips spokesman expressed the company's position that IBM will have to allow clones of its machines for them to survive. "They need to show people that it's going to be a standard," says Gary Martin, CFO. "If it doesn't take off, it becomes another PCjr."

KAYPRO HOPES TO BE FIRST ON BLOCK WITH PS/2 CLONE

SOLANA BEACH, Ca. (NB) — While it is generally known that virtually all major PC manufacturers have a PS/2 clone on the drawing boards, few are announcing them, expecting that the first PS/2 clone maker will also be the first hit with a lawsuit by IBM. But Kaypro Corporation has boldly gone where no other computer maker has gone before, and has announced it will release an 80286-based PC with a Micro Channel Architecture-compatible bus by June. Kaypro President David Kay has reportedly failed to disclose details of the machine but has stated that Kaypro will have a license from Big Blue for the PS/2 technology.

HEWLETT PACKARD SET TO UNVEIL LASER-LIKE INK JET PRINTER

VANCOUVER, Wa. (NB) — On February 1, Hewlett Packard is expected to announce a \$995 ink-jet printer that's said to rival the laser printer in output. The DeskJet, said to print two pages per minute and produce a 300 dots per inch output, reportedly has a laser printer driver, unique in ink-jet style printers. The DeskJet will be aimed at the letter-quality printer market and could be a significant product for the company.

ASHTON-TATE/MICROSOFT TEAM UP TO BEAT IBM

REDMOND, Wa. (NB) — Microsoft and Ashton-Tate have announced plans to jointly market a software product which promises to compete, in the area of networking, with IBM's coming Extended Edition of OS/2. Microsoft and Ashton-Tate will jointly market SQL Server, based on technology licensed from Sybase of

Berkeley, Ca. The product will allow networked PCs to share data and perform calculations previously reserved to minicomputers and mainframes, a task IBM has also proclaimed will be possible with Extended Edition of OS/2. While neither company has announced a release date for the software, they have said it will be available in the second half of this year.

The move is strategic for Ashton-Tate, whose dBase family of products has been in need of an upgrade in order to facilitate the demands of a network.

THERE GOES THE NEIGHBORHOOD; LOTUS MOVES NEXT TO MICROSOFT

BELLEVUE, Wa. (NB) — Lotus' Chairman Jim Manzi denies any ulterior motives in his firm's opening of a major sales office in archrival Microsoft's home base. Lotus is opening a major sales office in Bellevue, just minutes from Redmond where Microsoft's corporation headquarters are located. In fact, says Manzi, the firms may be rivals but the chairmen of the two companies are best of friends, Manzi told the SEATTLE TIMES. "We know each other quite well. I am coming out to Seattle in March. I think I am having dinner at his (Bill Gates, Microsoft Chairman's) house."

Lotus plans a 13-staff office to market Lotus 1-2-3, Modern Jazz, & other products in the Northwestern US.

DIGITAL LIKES CLONES, TOO

BOSTON (NB) — Lest makers of IBM PC clones feel left out by Digital's announcement that it is developing links between DEC equipment and the Apple Macintosh, Digital has told reporters that it will continue to push links between its VAX computers and the world of the clones. Digital is specifically targeting Compaq, Zenith, and AT&T (Olivetti) personal computers for VAX links. Henry Ancona, Digital vice president, said, "Apple is a piece of Digital's broader strategy," which includes linking virtually anything that can compute into the VAX world.

Digital also has confirmed that it's troubled by the recently-announced deal between AT&T and Sun Microsystems to upgrade the UNIX operating system. Digital is one of more than a dozen companies which use UNIX which signed a letter to AT&T expressing concern about the Sun-AT&T deal. The other UNIX-users fear that Sun and AT&T will make UNIX proprietary.

LOTUS UPGRADES SYMPHONY, JAZZ

CAMBRIDGE, Mass. (NB) — Lotus Development Corp. has unveiled Symphony 2.0, a new version of its integrated software package for IBM PCs and clones. At the same time, Lotus said it would ship Modern Jazz this quarter. Modern Jazz is a new version of its disappointing Jazz spreadsheet and integrated software for the Apple Macintosh computer. Symphony (not copy protected) will feature an enhanced word processor, a text outliner, spelling checker, a file locking utility, and VT-100 terminal emulation. Available in February, Symphony 2.0 will cost \$695 retail. Upgrades range from \$95 to \$150. For more information, call 1-800-TRADEUP.

Modern Jazz will be priced at \$395 and Lotus will communicate with registered Jazz users by mail on upgrades at \$95. The new Jazz will read Jazz 1.0 files and 1-2-3 files. A key feature of Modern Jazz is an English-like command language with a library of macros for automated and customized applications. The program runs on the Mac Plus, SE, and II. It needs one megabyte of RAM, two 800K drives or a hard drive.

NEWSBYTES are compiled by Wendy Woods, Ken Maize, Dana Blankenhorn, Masayuki Miyazawa and Keizo Yamamoto, and Grant Buckler Copyright 1987, 1988©

Lotus still plans to introduce a version of its best-selling 1-2-3 for the Macintosh line sometime this year, but so far that product is vaporware.

THE MARKETS

HIGH TECH STOCK SCOREBOARD: MOST LOOKING GOOD

SAN FRANCISCO (NB) — Silicon Valley firms performed with flying colors in the latest quarterly reports. Here's a sampling:

- **APPLE COMPUTER** reports a record 108% jump in earnings to \$121.4 million in the last quarter. Revenues passed \$3 billion. Strong sales of the Macintosh SE and the Apple IIGS get the credit from CEO John Sculley.

- **BUSINESSLAND** enjoyed a 90% leap in profits, and a 41% jump in revenues compared to a year earlier. The retail chain reports revenue of \$232 million.

- **MICROSOFT's** income jumped 79% to \$35.3 million on sales of \$155.9 million. The credit here goes to strong sales of OS/2 packages, Microsoft Windows-386 and Windows Version 2.0.

- **SUN MICROSYSTEMS** blasted into the stratosphere with a doubling of revenues (\$235 million) compared to a year earlier.

ADOBE TOP SOFTWARE STOCK PERFORMER IN '87

PALO ALTO, Ca. (NB) — Adobe Systems stock was the top earner in 1987, according to a ranking just published by "Softletter," a software industry newsletter published by Jeffrey Tarter in Cambridge, Ma. Adobe started the year at \$12.75 per share and ended at \$29.50, a 131% yield for investors. Second in line was Microsoft with a 124% yield. Following in declining order were Lotus, Autodesk, Micropro, Samna, Innovative, Software Publishing, Ashton-Tate.

Activision, Aldus, and Springboard were the only three in the survey which lost money for its investors. Aldus, which started at \$20/share for an initial offering in June, ended the year at \$17.50, a drop of 12.5%. But Springboard really disappointed investors, losing 56% of its \$7.75 price over the course of the year.

CONTACT: SOFTLETTER, 617/868-0157

NEWSBYTES CANADA

IBM CANADA PROFIT UP LESS THAN PARENT'S

MARKHAM, Ont. (NB) — IBM Canada Ltd. reported net income of C\$231 million in the year ended Dec. 31, up 3.6 per cent from the previous year's C\$223 million. That's less impressive than the parent company's 9.8-per-cent increase, which was helped along by a temporary decrease in income taxes. IBM Canada's revenues were C\$3.104 billion, up from C\$2.924 billion in 1986. The company's exports rose 20 per cent to C\$993 million.

CONTACT: IBM CANADA LTD., 3500 Steeles Ave. E., Markham, Ont. (416) 474-2111

CANADIAN COMPUTER STOCKS HAVEN'T RECOVERED

TORONTO (NB) — If you were an optimistic investor after the stock market crash of October 19, and you bought a basket of Canadian high-tech stocks at bargain-basement prices, you are not rich yet. In fact, unless you picked very well, you're poorer now than you were three months ago.

NEWSBYTES CANADA checked the prices of 18 computer-related stocks on the Toronto Stock Ex-

Continues on page 6

FREE SUBSCRIPTION TO THE COMPUTER PAPER

(well sort of free, you see you have to fill in this questionnaire to get it. But if you do, then we will mail it to you and you will never have to miss an issue.)

Dear Reader,

Welcome to the Computer Paper for our Premiere Issue. We hope you are enjoying it. We would like to start things off right by getting some feedback from you. As an incentive, we will put you on our mailing list if you take the time to fill in the questions below.

The questions are to give us an idea of what's happening to our first effort, and to give us direction as to where you would like to see it go. It also gives us something to tell our advertisers when they ask "who's reading it?" So we encourage you take a few moments and fill in the answers.

1) Which articles did you read? And how do you rate them 1- 10. (10 is good, 1 is bad.)

Name of Article	Rating
_____	_____
_____	_____
_____	_____
_____	_____

2) How many other people read your copy of The Computer Paper?

- ☐ Nobody
- ☐ One person
- ☐ 2-5 people
- ☐ 6 or more

3) Do you plan to keep the paper once you have read it?

- ☐ yes, to refer back to the articles
- ☐ no, don't intend to keep it
- ☐ other _____

4) What is your position in the company?

- ☐ President/Director/CEO
- ☐ Vice President
- ☐ Senior Manager
- ☐ Middle Manager
- ☐ Entrepreneur
- ☐ Consultant
- ☐ Salaried Employee
- ☐ Other _____

5) Are you:

- ☐ Male
- ☐ Female

6) Do you influence your company's decisions on purchasing, leasing or renting any of the following? Check all those that apply:

- ☐ computer accounting services
- ☐ Desk top publishing services
- ☐ computer consulting
- ☐ computer hardware
- ☐ computer software
- ☐ office equipment: typewriters, copiers
- ☐ office furniture
- ☐ computer stationery
- ☐ telecommunications equipment
- ☐ on line computing services
- ☐ other _____
- ☐ none of the above

7) What category best describes the industry you work in?

- ☐ retail trade
- ☐ wholesale trade
- ☐ manufacturing
- ☐ construction
- ☐ resource based
- ☐ transport/communications
- ☐ banking and finance
- ☐ insurance
- ☐ accounting
- ☐ business services
- ☐ professional: health, legal, education
- ☐ professional: engineering, architectural
- ☐ public service/government

8) How many employees work for your company in the Vancouver area?

- ☐ 1-5
- ☐ 6-10
- ☐ 11-25
- ☐ 26-50
- ☐ 51-100
- ☐ 101-250
- ☐ 251-500
- ☐ 501-1000
- ☐ 1000+

9) What best describes your office?

- ☐ Branch office
- ☐ Local office
- ☐ Head office
- ☐ Other _____

10) What is your company size by total annual sales/revenues?

- ☐ Under \$100,000
- ☐ \$100-250,000
- ☐ \$250-500,000
- ☐ \$500-1,000,000
- ☐ \$1-5 million
- ☐ \$5 million +
- ☐ other _____

11) How old are you?

- ☐ under 25
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 55-64
- ☐ over 65

12) What is your highest level of education?

- ☐ High School
- ☐ Some/completed post-secondary
- ☐ University degree

13) In what area do you live?

Postal Code: _____

14) What is your household income?

- ☐ under \$30,000
- ☐ \$30,000-39,999
- ☐ \$40,000-49,999
- ☐ \$50,000-59,999
- ☐ \$60,000-69,999
- ☐ Over \$70,000

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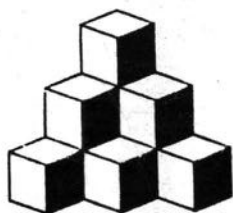
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change at closing on Friday, Oct. 16, at closing on Black Monday, and again at closing on January 15. Not one of those stocks — which range from small Canadian-owned firms such as BMB Compuscience and Accugraph Corp. to Bell Canada Enterprises, Xerox Canada and IBM — has climbed back to its pre-crash price. On average, the 18 stocks dropped 13.14 per cent on October 19, and they're now 22.87 per cent below pre-crash prices.

Communications-related companies have rallied almost to pre-crash prices (Bell Canada Enterprises closed Jan. 15 at C\$36.50, having closed Oct. 16, 1987, at C\$36.75), while computer companies have continued dropping. One exception is Develcon Electronics, the troubled Saskatoon communications equipment maker, which dropped only 10 cents on the day of the crash and has since fallen two dollars more to C\$1.70. The other is IBM, which closed Oct. 19 at C\$148 and is now up to C\$150.

The Toronto Stock Exchange's High Technology Index (which contains companies from industries other than computers and communications too) has held steady at about 776.

EPSON TO APPEAL PRICE MAINTENANCE FINE

TORONTO (NB) — Epson Canada Ltd. says a C\$200,000 fine assessed against the company for illegal price maintenance is excessive and it will appeal. Epson pleaded guilty to the charges, which arose from a clause in dealer contracts requiring dealers not to advertise Epson products at less than suggested list price, but said it had not known the clause was illegal. The judge in the case agreed with that claim, and found that no damage to dealers or consumers resulted from Epson's action. Although not questioning the conviction, Epson wants the fine reduced.

Epson Canada said in a statement the clause was inserted in its dealer contracts "to try to protect dealer margins so that dealers would be able to offer proper service and support to their customers." The company also said it is concerned about the existence of a "grey market" in Epson products in Canada, in which Epson equipment is sold by non-authorized dealers at bargain prices. Buyers may not be aware such products are not covered by Epson Canada's one-year warranty, the company said.

Epson Canada is Canadian-owned, with 81 per cent of the company controlled by its president, Maurice LaPalme.

CONTACT: EPSON CANADA LTD., 285 Yorkland Blvd., Willowdale, Ont. M2J 1S5, (416) 495-9955

WAIT-AND-SEE ATTITUDE GREETES CLARIS

VANCOUVER (NB) — The creation of Apple Computer's software "spinout," Claris Corp., will probably be a good thing in the long run, Canadians who develop software for Apple machines believe.

"We would be very surprised if the actions that Claris takes negatively affect development activity," said David Rebak, a director of Chancery Software Ltd. in Vancouver. Apple Canada has generally been supportive of third-party developers, Rebak said, and there is no reason to expect a change. He said Claris could be a boon to smaller developers, helping them market their products.

Tom O'Flaherty, vice-president of marketing at Bedford Software Inc., also in Vancouver, agreed that Claris could help smaller developers through marketing partnerships. He added that expanding the software base for Apple hardware should benefit everyone. "I think it's Apple's intention to cover the world with Macintoshes, and I think that their software subsidiary has been set up to further that end."

Malcolm MacTaggart, general manager of Microsoft Canada Inc. in Toronto, said his company is "very pleased" with the move, which he believes will help Macintosh sales by offering buyers more choice of software. Susan Fisher of Logo Computer Systems Inc. in Montreal said the move "could have a positive effect."

The reasoning behind separating Claris from Apple — getting Apple out of direct competition with third-party developers — meets with some skepticism, however. "It's arm's-length in theory only," commented Rebak. "It isn't independent until Apple actually sells it off." O'Flaherty says Claris will benefit from having Apple's resources behind it.

However, said MacTaggart, "I don't think there's any intention on the behalf of Apple to provide Claris with any unfair advantage."

CANADA REMOTE SCRAPS ONTARIO COMPUTER EXCHANGE

TORONTO (NB) — Canada Remote Systems Inc. is dropping the Ontario Computer Exchange after three months of "trying to figure out how to integrate the OCE into our operations," the hardware and software dealer and bulletin board operator said in its latest membership newsletter.

The exchange, which was affiliated with the Boston Computer Exchange, "requires considerable effort in tracking down used equipment," president Jud Newell wrote. "It also appears to need a much harder sell than we're prepared to give. Canada Remote has never been noted for the hard sell-pushy type of operation, and we're not about to start now."

CONTACT: CANADA REMOTE SYSTEMS, Suite 311, 4198 Dundas St. W., Toronto, Ont. M8X 1Y6, (416) 231-2383

COPYRIGHT LAW MIGHT MAKE MANY USERS TECHNICALLY PIRATES

OTTAWA (NB) — Canada's proposed new copyright protection for software might put a lot of personal computer users on the wrong side of the law.

The new law, due to go before the House of Commons in the next few weeks for third reading and final debate, specifies that the licensee of a software package may not make more than one copy of that software, for his or her own use, without the vendor's permission. That means if you make two backups, or if you copy the software to your hard disk and then back up the entire contents of the hard disk, you are technically breaking the law.

Originally the proposals would have allowed a "reasonable number" of backup copies. Michel Hetu, a spokesman for the federal Department of Communications, which helped draft the proposals, said the wording was changed because some software companies wanted a limit on backup copies specified. And Graeme Hughes, president of the Information Technology Association of Canada in Toronto, said that while his organization didn't ask for the one-copy limit, it generally agreed with the legislation. Careful computer users shouldn't panic, however. Toronto lawyer David Latner, of the firm Gordon, Traub and Rotenberg, said nobody is likely to prosecute a user for making legitimate backup copies.

- **BEDFORD SOFTWARE LTD.**, of Vancouver, has released Version 3.21 of its Integrated Accounting software. The new version includes 1988 tax tables for all Canadian provinces, updated Workers' Compensation Board wage bases, and the ability to print T4 forms for Canadian income tax in the current format. Suggested retail price is C\$249.

— **MICROSOFT CANADA INC.**, Toronto, has appointed Jonathan M. Sachs to the position of national sales and marketing manager. Sachs was formerly marketing director at The Creative Marketing Network Inc., Microsoft Canada's public relations agency.

— **THE CANADIAN GOVERNMENT** has imposed a new federal telecommunications tax of 10 per cent on all long distance phone calls, whether residential or business. On the other hand, Teleglobe Canada has reduced rates for overseas phone calls from Canada by an average of 13.5 per cent. The net result is that calling a BBS on another continent still costs more than most of us can afford.

NEWSBYTES-JAPAN

By Masayuki Miyazawa and Keizo Yamamoto

FUJI XEROX TIES UP WITH SUN MICRO SYSTEMS

TOKYO (NB) — Fuji Xerox and California-based major workstation maker Sun Micro Systems have signed a broad business agreement which includes joint development of computer central processing units and operating systems. To start, Fuji Xerox will adapt Sun's processor called Scaleable Processor Architecture Computer (SPARC) to its workstation. With SPARC, Fuji Xerox expects to make the performance of its machine more than ten times faster. Meanwhile, Fuji Xerox and Sun will jointly develop a new operating system with powerful network features. The new operating system will be based on the SUN OS, Sun's version of Unix operating system. Both firms will add SUN OS with Fuji Xerox's communication protocol, and Xerox Network systems (XNS).

CONTACT: Fuji Xerox, International Sanno Bldg., 3-3-5 Akasaka, Minato-ku, Tokyo 107

CHINA GETS DOWN TO PC EXPORTS — China is getting ready to export personal computers to the world market in a big way. According to a published report, the Chinese Computer Development Corp. (CCDC) exported about 1,100 units of its IBM PC/AT-compatible PC, the Great-Wall 286, during September and November of 1987. The number is small but the company has gained major customers in the U.S., Singapore, Hong Kong, and Australia. CCDC will export more PCs this year.

MINOLTA ENTERS PC MARKET

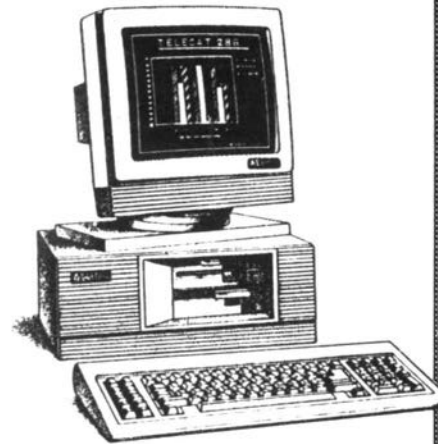
TOKYO (NB) — Osaka-based Japanese camera maker Minolta will release two types of IBM PC-compatible personal computers in Europe and the U.S. in February. The PCW-2 and the PCW-3 have an 8086 CPU, and some business programs are bundled with the machines. They are a Japanese word processing program, an English typewriting program, a scheduler, and a calculator. The PCW-2 has two 5-inch FDDs, and the PCW-3 has a 5-inch FDD and a 20 megabyte hard disk. They are priced around \$3,590.

CONTACT: Minolta Camera, Osaka Kokusai Bldg., 7-30 Yasudo-cho, Higashi-ku, Osaka-shi 541

SUSHI BYTES

PHOENIX TECHNOLOGIES IN TOKYO — Phoenix Technologies, Ma, USA, will set up a chip design center in Tokyo. The company will design IBM-compatible computers and provide a consulting service. It is also expected that the company will set up the design centers in Korea and Taiwan.

CRAY JAPAN AND TOSHIBA — The American subsidiary of supercomputer firm Cray Japan and Toshiba have officially agreed to cooperate on sales of Cray computers in Japan. In the agreement, Toshiba will bundle Cray's supercomputers with various Japanese computers and peripheral equipment to meet the demands of Japanese customers.



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ALTEC DESIGN GROUP LTD.

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Simply Accounting: Macintosh Accounting From Bedford

Program Requirements and Size

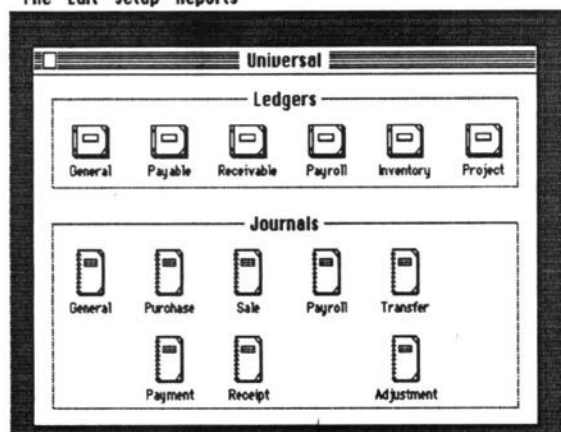
Simply Accounting Program: 409.5K Help File: 7K
File Size: requires at least 800K of on-line storage.
The program needs 1 megabyte of memory and the newer 128K ROMs to run (a Mac Plus or better). Up to 5000 GL accounts can be created using a 4 digit design. \$20 million dollars is the maximum account balance value it can handle. Suggested Retail Price is \$449. Updates are \$89/year which includes program enhancements and tax tables for the payroll module. The program is not copy protected.

Who's it for?

Bedford's new accounting program, Simply Accounting is a late entry into the increasingly crowded accounting market for Macintosh. It is a low end single-user accounting system for small business. The target market for this product is small business accounting. Simply Accounting will be competing with the likes of In House Accountant (GL, AR, AP ~\$200), Back to Basics (GL, AR, AP \$328), and Accounting Inc. (GL, AR, AP, Inv. \$439) While it is a powerful program, it lacks some useful features such as password protection, and a graphing capability.

Simply Accounting features fully integrated GL, AP, AR, Inventory, Payroll and Job Costing modules, all on one disk. All balances are constantly updated as entries are made. Reports can be sent to the printer or the screen, which facilitates error checking. The job costing module gives the ability to break out project, department or profit centers.

File Edit Setup Reports



The start-up screen

Ease of Use

The program puts the Mac interface to good use. Data entry is smooth and intuitive. Error handling is reasonably good with the entry controls provided. For example, the date entry controls give warning if the date of entry is changed by more than one week. If the date moves past a significant accounting date it also sends a warning message to the screen.

Most fields where there is a finite set of entry options have a pop up, scrolling window which allows a "point-and-click" for the appropriate entry. These scrolling window also supports the arrow keys on the newer Mac keyboards.

The ability to split journal entries between up to 255 ledger accounts is available. This feature is designed for those month-enders who take out \$2,000 in petty cash, and then need to disperse it over a hundred or so expense items.

Two minor complaints against the program were found with respect to data entry. A keyboard equivalent of Posting would speed data entry. There is an argument that errors will be noticed if the user has to do something different to Post an entry (i.e. pick up the mouse and click) but the reality is that switching to the mouse slows down entry considerably. Another improvement would be the ability to cancel a report request with a "Command-Period" as is available in a number of Mac databases. This is especially useful with reports requested in error that take a while to compile.

Performance

Bedford has taken the same approach on this version as their PC program where much of the data is loaded into RAM. This makes the program run very fast. Because the basic Mac it can run on has a megabyte of memory, it has more capacity than the PC which is limited to 640K RAM. Correspondingly, the capacity of accounts is about double that of the PC version.

The program allows the user to save whenever they wish, in addition, it will save whenever an entry is posted and when the program is closed. This provides reasonably good protection against losses within sessions of data entry.

Ready or Not...The Set Up

Set up is fairly straight forward except that the "Ready - Not Ready" method of compiling the program to integrate all the Journals is a little confusing. Bedford's approach is unique here in that it allows historical data to be entered and balanced before the program becomes integrated. The "Ready - Not Ready" feature protects data integrity, once Ready is set, it is not possible to alter GL Account balances, though it is still possible to add more GL accounts and rename existing ones. It is a good idea to read through this section a couple of times before launching into your conversion.

Six starter templates are provided on disk. They cover a good range of GL account options so that with a few modifications, most small business can be set up without having to enter everything from scratch. Using the existing templates has the added benefit of having the integration accounts already determined. This, fortunately, is not a complex task if it becomes necessary.

The program uses four digit numbers for the chart of accounts. There are preset ranges which must be used for Assets, Liabilities, Equity, Revenue and Expense accounts. These cannot be changed. Each set of accounts is limited to 1000 accounts. So although the program can potentially handle 5000 accounts only 1000 of them may be any one set of accounts such as Expenses. This should not be a limitation for most small businesses, but it may be a consideration for unusual cases.

Receivables and Payables

The program employs the open invoice method for both receivables and payables. There is no option for balance forward invoicing however customer or vendor invoices that are fully paid may be either purged or retained. The documentation claims that the program can handle 2,000 customers or vendors with transactions limited only by available memory. The aging periods can be defined by the user. This is a worthwhile addition, avoiding the limitation of the standard 30-60-90

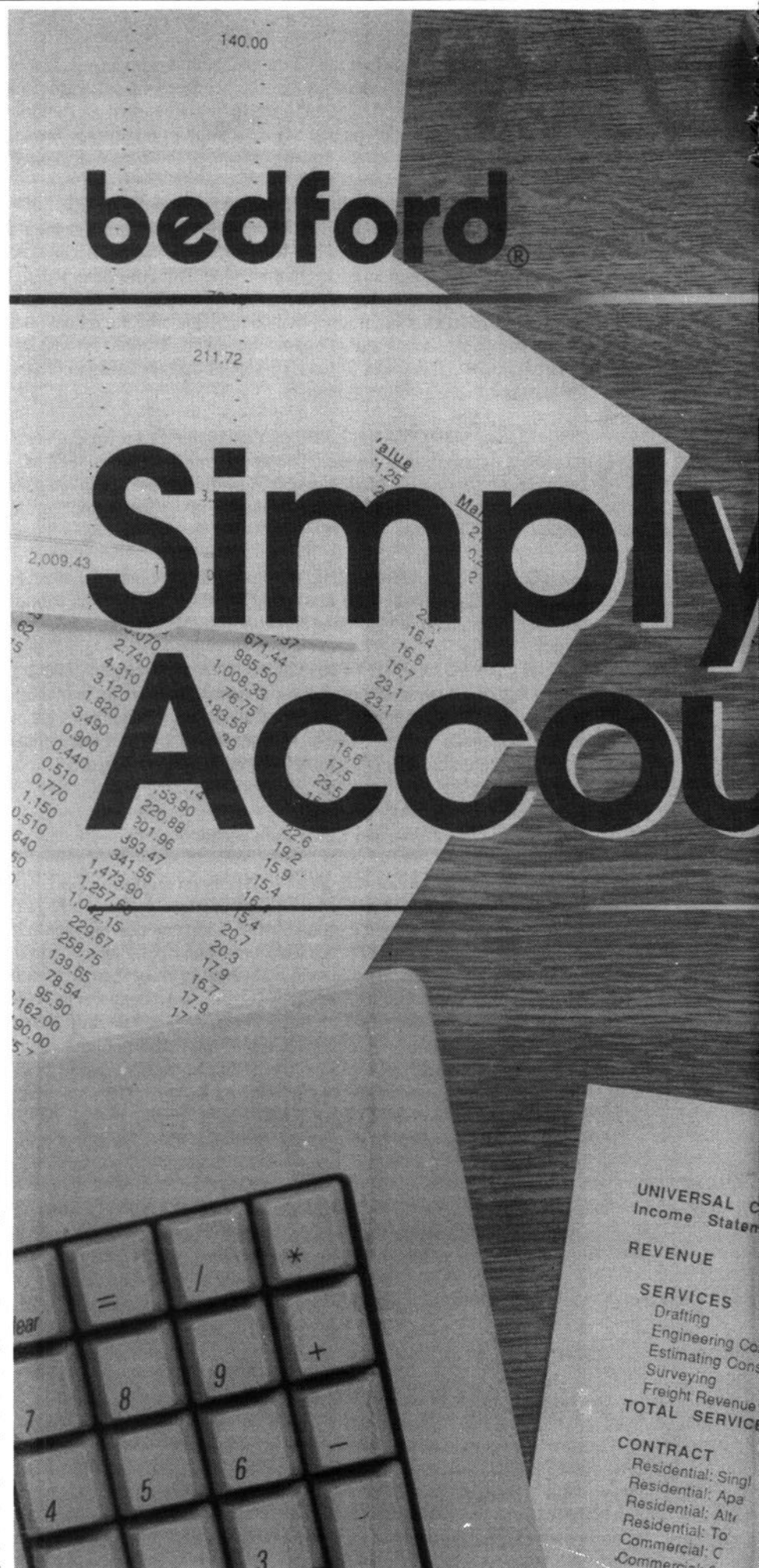
days. The program can be used in conjunction with a manual invoicing or cheque system, or by printing on custom computer forms.

Inventory

The Inventory module uses the average weighted cost method and can report on a margin or a mark-up basis. It updates from the Receivables and Payables modules, a nice feature for small retailers. According to the documentation, it can handle up to 10,000 inventory items.

Job Cost

Any revenue or expense transaction can be allocated to profit centers, divisions or projects. Up to 2,000



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UNIVERSAL CONSTRUCTION
Balance Sheet As At Jun 15, 1987

ASSETS

CURRENT ASSETS

Royal Bank: Loughheed

Royal Bank: Pender

Toronto Dominion Bank

Cash: Total

Notes Receivable

Interest Receivable

Accounts Receivable

Doubtful

active projects can be in use at any one time. The reports produced are for revenue and expense by project, and they may be detailed or summary. The program will not produce separate balance sheets by these divisions, only a schedule of revenues and expenses.

Payroll

See the Payroll survey in accompanying article for detail on Simply Accounting's Payroll.

Reports and Printing

A shortcoming of this program is that it lacks a batch mode for printing cheques. Each item must be processed and printed individually. This approach does allow for both manual and computer generated cheques

but this is a double edged sword. Its a nice feature with the potential to create havoc, because printing a cheque doesn't affect the journal entry. It is conceivable to print out two or more of the same cheque.

Another missing feature is the ability to print out statements and invoices on plain paper, the user must buy additional forms, which are readily available, but it would be a nice feature to be able to design and print custom invoices and statements.

Reports are limited in their flexibility. In designing reports, it is a nice addition to be able to choose fonts, but the program doesn't give access to different font sizes. The screen font and the printer font may also be different. One slick addition is the ability to suppress zero balance accounts from reports.

There is no budgeting feature to Simply Accounting. The program will not retain last years figures either. The current month and year to date do not appear on the same report. Fortunately, it is fairly easy to print reports from different periods. The program does have exporting capabilities for any of its reports which can be easily sent to spreadsheets and text files. This is a nice feature to spruce up the programs somewhat limited reporting functions.

An audit trail is also available from the General Journal Report.

Documentation

Simply Accounting comes with a very professional looking three ring binder Users Guide and accounting manual complete with section divider tabs. The major shortcoming of the manual is that the tutorial section is skimpy. It moves off into other areas before giving a comprehensive feel for the program. Therest of the manual suffers from a simplistic approach in some areas. It assumes that every one is a Mac novice, and doesn't mention keyboard shortcuts or double clicking where they would be appropriate. At one point in the User's Guide they go so far as to suggest returning to the Finder to open a new file instead of using the "Close" and "Open" menu options under the File menu.

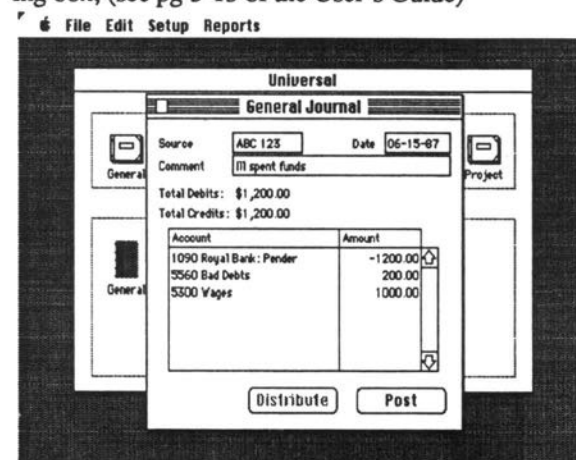
The manual includes a limited

though useful accounting manual. The intention is not to teach accounting, but rather bring the user up to the level of understanding necessary to use the program correctly. Some may still require the services of an accountant in setting up their books.

The documentation also suffers from a short index. For example, the seemingly relevant item of "Posting" is not indexed. Another helpful feature would have been to print the chapter headlines on the tabs which divide the sections rather than just using numbers. The number "3" doesn't tell very much, but "Tutorial" might.

The "Tips" sections of the manual could be sepa-

rated out more effectively, sometimes the main body of text runs into the tips, and doesn't seem to make sense, a different font would have helped, or perhaps a dividing box, (see pg 5-13 of the User's Guide)



Making journal entries is fast and easy

The help files included on disk are very limited, accounting for only 7K, but they can be somewhat helpful on occasion. To call them extensive though would be a definite overstatement.

Support

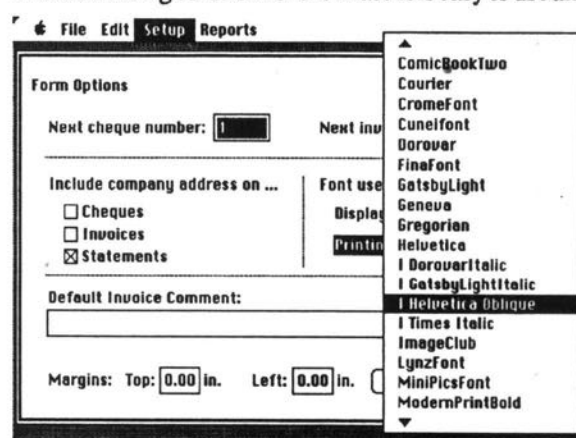
Bedford offers telephone support, (customer pays the long distance charges if from out of town) by subscription for \$60 per hour. Payroll tables and program updates are available for \$89 a year. Bedford will replace defective disks for free.

We Missed You...

The lack of password protection seems major. Even one or two levels would be useful in a small business to protect sensitive information regarding payroll, etc. Why they left it out is a mystery since password protection is available for the PC version, although it was apparently complex to use. Bedford seems to have thrown the baby out with the bath water by not including it here. Not having automatic posting for recurring entries such as rent or lease payments is another big oversight by Bedford. A graphing capability, while not yet a standard feature in accounting programs on the Mac, is certainly a missed feature here in Simply Accounting. Finally, a plain paper option for statements and invoices would be a great addition, for those who don't want to spend more on custom forms.

Value

Bedford has come up with a slick and polished low end accounting solution for the Mac. It is easy to use and



pop up menus allow for font control

fast to set up. Given Bedford's reputation for quality at a good price in PC accounting software and the growth of Macintosh sales, it seems likely that this product will be well supported and improved. With the addition of a Canadian payroll option, Simply Accounting should be a high priority choice for a number of Canadian small businesses with straight forward accounting needs. (An American version is also due out shortly.) Although the pricing seems a touch high, given the "plain vanilla" features offered, we rate the program value as good.

Survey of Canadian Payroll Software

Is it worthwhile to put your company's payroll on your office PC? The banks and some accountants may tell you no. We attempt here to give a survey of your best options available running on both MS-DOS machines and Macintoshes. In setting up our comparison table, we found in many cases we were comparing apples to oranges and to avoid an extremely cluttered and unreadable table, we opted for a more simplified rating scale: one (✓) means that the program supports the feature, two (✓✓) if it does it well and three (✓✓✓) if it excels in some way.

Product Positioning

Each of these programs of course has its own market niche. ACCPAC is designed for the user who requires the flexibility and capability provided by its user definable formulas for earnings and non-statutory deductions. It is targeted to a medium sized business with a large number of employees possibly requiring jobcost or departmental reporting. It is also well suited to non-profit organizations with a large number of employees.

Bedford on both the PC and Mac is designed for the small owner managed business with a small number of employees who requires distribution of the payroll costs to jobs.

Both MacPayroll and Paytime fit into the middle of the spectrum. They have more flexibility in defining earnings and deductions than Bedford but lack the capability of user defined formulas as in ACCPAC. Paytime is a dBase II program and MacPayroll is written in a Mac database program called Omnis 3. Correspondingly both programs pay a price in speed of screen refresh and report updating.

Another middle-of-the-roader is Accounting Master. This is a stand alone product with many powerful features. Accounting Master is positioned as a product to handle larger payrolls without the complexities of ACCPAC. It writes directly to the ACCPAC general ledger.

All the programs allow for the printing of duplicate cheques in the event of errors in printing. This brings up an important accounting difference between the programs. Only ACCPAC provides an audit trail which would identify that multiple cheques have been run.

BEDFORD: MAC AND PC

Bedford's software does about the same thing on both the Mac and the PC, so the price differential between the programs seems a little steep. Whatever happened to economies of scale? The package is a slick product in both incarnations. The manuals are well done, if a little thin in the tutorial sections.

Bedford on both machines is weak in reporting functions. It does not give a monthly payroll summary report and a report which calculates the remittance to the Government. The information is posted to the General Ledger and is available but it does not come out in a specifically named report as in the other programs.

All the programs will print T-4s for employees. Bedford however, does not produce an employers summary of T-4s. Neither does it total the earnings and deductions so that a summary can be prepared from system information. These shortcomings in Bedford's payroll portion suggest that it is not a good choice as a stand alone payroll program. If, however, Bedford was acquired for the General Ledger or other functions, and the choice is between a manual payroll and using Bedford, Bedford's is better than nothing. The information is all there, it just isn't always labelled as such and sometimes takes a bit of work to get it out.

One of the major differences in the operation of the systems is that Bedford requires the user to print the cheque and stub immediately after entry of each payroll record. This creates a situation of having to enter and print, enter and print. If the number of employees is

small, this will not be much problem, in larger companies, this approach would be very time consuming. All the other programs take a batch mode approach to the payroll process. The data entry person would enter a large number of time sheets in one session. The entire cheque run can then be run in one batch.

MACPAYROLL

MacPayroll does a good job of generating a healthy supply of reports. The documentation is decent, although a good tutorial, beyond the on-disk sample would probably lower the learning curve. One nicety is that they have a free user support line and more often than not you can get either the company president or the head programmer on the phone. The program is a little slow in getting screens and reports up, a function of being written in the database language Omnis 3. Once you get it all in there though, it can print out a payroll in fairly short order. Advances can be done either individually, or with a global command for a group of employees. Year-to-date totals on individual employees cannot be altered except by posting reversing entries, which leaves an audit trail. The software has some slick error checks including the ability to detect bogus Social Insurance Numbers. This is possible because the ninth SIN number is a check sum.

MacPayroll's worst characteristic doesn't have anything to do with its accounting abilities. It is ugly...Omnis ugly. This is a characteristic that would not show up as much in a PC version, but it stands out against other Mac programs which allow much more flexibility with fonts and screen representations.

If you can get past the look of it, it has beauty, especially at the new pricing just announced by Altec. As of February 1, the program will retail for \$149. The company also intends to release a fully functioning freeware version which will do 1-5 employees.

PAYTIME

An important accounting concern with Paytime is that the year-to-date information for any employee can be altered and no audit trail report is generated by the system. Otherwise the program operates as stated. It is reasonably flexible in its earnings and deductions. The documentation could be improved by expanding the index and introducing a tutorial. A search through the index more often draws a blank than a source of further information. More on screen help would also facilitate matters. Data entry is clumsy in Paytime. It is often necessary to press RETURN to move the cursor through a screen in which no data was to be entered.

ACCOUNTING MASTER

Accounting Master bears some resemblance to another payroll program called Journal Master which departed last year. Accounting Master has many improved features, including a liberation from using custom forms. It will now let you use plain paper to print cheque stubs. As mentioned previously, the program will write directly to ACCPAC general ledger files. It does this for Client Strategist as well, another popular accounting program.

A full set of reports combined with a large degree of flexibility in both deductions and earnings types make this a stand out program. The program allows for all three types of entering for both earnings and deductions:

- 1) a manual entry, where the amount is typed in at each session,
- 2) an auto entry, where a fixed amount is entered in advance and recurs at each payroll
- 3) a formula entry, where the amount of the deduction is a percentage of some earnings number.

In addition, a manual override is available for any recurring or formula entry.

Your accountant may still grumble, but they are more likely to grumble approvingly at the way Ac-

counting Master deals with altering account balances. Although it is possible to alter year to date earnings numbers, this feature is only accessible to the highest level of password control. It still allows you to print multiple versions of a cheque, but this is a trade off, of more user flexibility versus lower accounting controls.

ACCPAC

ACCPAC is very complex. Setting up the system for the first time is not for the faint of heart. Advance planning, the manual and strong nerves are the key to a successful approach to setting up the ACCPAC payroll. Once set up, the program is not difficult to use and things go in smoothly. Data entry is fast and can be speeded up by the use of recurring time sheets. Adding new employees to the system goes very fast if job classifications are set up for employees with similar earnings and deduction types.

Information can be generated for job costing, sections and departments. It may sound like a lot to the average small business but twenty earnings categories can prove to be a limitation to some mid-sized companies. More importantly, only twelve non-statutory deductions are available. ACCPAC does not include the employers portion of the payroll costs in its job costing or section reporting, an important oversight.

THE BANK

What about the Bank you say? The costs run around a dollar per person per payroll, so you figure it out if it is worth it for your company. On the plus side is that someone else takes care of updates, changes in government regulations and even getting the money into your employees accounts. You also don't have to worry about explaining payroll inequities to curious employees - only your banker knows for sure. On the negative side is that the banks charges can run up fast with a large payroll, you have to get the information to them farther in advance than if you where to do it in house, they get to sit on your government contributions for a whole month before remitting it - they pocket the interest, not you. With a medium sized payroll, this loss of interest alone could be enough to rationalize the cost of most of the payroll programs mentioned here. Banks can't always calculate the earnings and deductions as you specify and there are limits to the job costing information that can be obtained.

And the Envelope Please...

All of the programs represent good value for the money. Whether that translates into a better buy than the bank or a manual system depends on your company. With the range and uniformly good quality products available, your computer can provide a good option for payroll processing.

For a complex payroll, ACCPAC stands above the rest. If it does not include all the required features it may be possible to obtain a modification. Paytime would be suitable for a small to medium sized business without too many complex earnings and deductions. Accounting Master offers a professional and easier to set up alternative to ACCPAC with the added bonus of integration. MacPayroll is a good solution for the "Macintosh Office". It is priced very reasonably and provides a good variety of reports. Bedford is most suitable for use for a very small payroll or if you bought it to handle the rest of you books and wish to maximize your investment.

The hard work for this article was done by Joan Horal, Certified General Accountant of Horal Consultants Ltd. Joan can be reached at 4707 Blenheim St., Vancouver V6L 3A5 Telephone 266-9596 - KSK

Canadian Payroll Programs

Product Name	Simply Accounting	Mac Payroll	Paytime	Accounting Master	ACCPAC Payroll	Bedford Integrated Accounting
Company Name	Bedford Software	Altec Design Inc	Zarcom Software	Accounting Master	Computer Associates	Bedford Software
Version	1.0	2.0	3.0	2.1	4.2	3.21
Operating System	MAC	MAC	MS DOS	MS DOS	MS DOS	MS DOS
System Requirements	MacPlus Mac 512K	256K	384K	128K	256K	
Cost						
Program	\$449	\$30-149	\$449-499	\$495	\$1200	\$199
Updates	\$89/year	\$120/year	\$240	\$49/update	\$295	\$89
User Support	\$60/hour	free	\$125/year	free	3rd Party	\$60/hour
Supplier Support						
Installation & Training	3rd Party		✓		3rd Party	3rd Party
Documentation	✓✓	✓✓	✓	✓✓	✓✓✓	✓✓
Tutorials	✓	✓		✓	✓✓✓	✓
Hot line	✓	✓✓✓	✓	✓✓✓	✓	✓
On-Line Help	✓			✓		✓
Customization available		✓	✓	✓	✓✓✓	
Capacity	✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓
Flexibility						
Earning Types	✓	✓✓	✓	✓✓	✓✓✓	✓
Range of Pay Periods Possible	✓✓	✓✓✓	✓	✓	✓✓	✓✓
Deductions						
Automatic Calculations	✓	✓✓	✓	✓✓✓	✓✓✓	✓
User Definable	✓	✓✓	✓	✓✓✓	✓✓✓	✓
Options						
Advances	✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓
Job costing	✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓
Multi- Provincial Employees	✓		✓	✓	✓	✓
Quebec Deductions	✓		✓	✓	✓	✓
User maintainable tables					✓	
Integrates to Accting Prgrm	✓		✓	✓ACCPAC	✓	✓
Batch Processing		✓	✓	✓✓	✓	
Multi-user Version					✓	
Password Protection	✓		✓	✓	✓	
Summary Reports						
T-4 ✓	✓	✓	✓	✓	✓	
Month end summary	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓
Report for Receiver General	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓
T-4 Summary	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓
Audit Trail	✓✓	✓✓	✓	✓✓✓	✓✓✓	✓✓
Performance						
Ease of Set Up	✓✓✓	✓✓	✓✓	✓✓	✓	✓✓✓
Ease of Use	✓✓✓	✓✓	✓	✓✓✓	✓✓✓	✓✓✓
Speed of Posting	✓✓✓	✓	✓	✓✓✓	✓✓✓	✓✓✓
Speed of Check Processing	✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓
Entry Error Checks	✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓	✓✓
Aesthetics	✓✓✓	✓	✓	✓✓✓	✓✓✓	✓✓✓

MACWORLD SPECIAL REPORT

MACWORLD CROWDS, NEW PRODUCT INTRODUCTIONS UNPRECEDENTED

SAN FRANCISCO (NB) — There's no doubt that the Macintosh has become a mainstream machine if the stream of traffic through and around the MacWorld Expo is any indication. Virtually all the garages in an eight-block radius of the Moscone Center were filled to capacity when the doors opened at 11 am and showgoers complained of being stuck in traffic for hours before they finally found a place to park. The show broke all attendance records for a San Francisco computer trade show, drawing 20,000 people the first day compared with 30,000 for all three days of the MacWorld Expo in 1987. The 300 exhibitors couldn't be more delighted, but few came prepared for the initial day's crowds. Even the press swarmed to the show in record numbers, so much that most companies ran out of press packets well before noon.

A variety of new exciting new products were announced, and our other reports have the highlights.

ORCHID INTRODUCES COLOR FOR THE MAC SE

SAN FRANCISCO (NB) — The highlight of the show for most people was Orchid Technology's new color video interface card for the SE, installed in an open slot of the Macintosh SE. The color image, up to 16 colors from a palette of 4,096, is displayed either on the Apple Color RGB monitor or an IBM or compatible VGA monitor which is hooked up to the Macintosh SE. The resolution is 640x480 pixels.

When used with a color monitor, ColorVue SE, has a 75% larger display area than the SE's own built-in black and white screen. A company spokesperson told NEWSBYTES that a number of the best selling paint and draw programs have all been proven to work in color using ColorVue SE and other manufacturers are adding the capability.

Due to be shipped in February, ColorVue retails for \$695. CONTACT: ORCHID TECHNOLOGY, Fremont, Ca. 415/683-0300

FORMS GENERATION A HOT NEW MACINTOSH APPLICATION

SAN FRANCISCO (NB) — Several firms showed off software to enable the Macintosh to generate professional-looking standard or custom forms, a hot new product area, according to Dataquest. The industry tracking firm predicts that the electronic forms management market will expand by 285% between 1985 and 1989, from \$700 million to \$2.7 billion.

J* Claris of Mountain View, California, displayed SmartForm Designer and SmartForm Manager, two programs which can be used to create expense reports, invoice, purchase requisitions, or loan applications, for example. It is an object-oriented drawing program that includes graphic tools for instant creation of such components as fields, lists, check boxes, and titles. It also contains data definition features that allow for electronic capture and the subsequent manipulation of data to fit the forms. Available in the second quarter of 1988, SmartForm Designer will cost \$395 and SmartForm Manager \$149.

*Softview, Camarillo, California, showed its prototype forms generator called FormSystem. Termed "graphically intelligent," the program has the ability to change and maintain a form's graphic consistency when any change in field size or graphic element takes place. The program has a basic word processor, spelling checker, spreadsheet interface, and bit-mapped graphics editor, among other features. Three releases are planned for the near future: Release I, which has the above features, Release II, which adds multiuser networking capabilities, and Release III, expected to have complete tools for painting, drawing, and charting.

NEWSBYTES was unable to obtain pricing on the packages.

*Shana Enterprises of Edmonton, Alberta, Canada, showed Fast Forms version 1.1, an object-oriented drawing program for forms creation that includes a variety of design elements including gray screens, hairlines, variable type sizes, text editing, customized independent horizontal and vertical grids, and printing and non-printing drawing planes. The program also performs calculations in data entry fields. The list price is \$149 and Fast Forms contains a free template disk filled with forms ready to use.

*Spectrum Digital Systems, Madison, Wisconsin, took a different approach to forms generation. A pre-printed form can be digitized in a scanner, fed into its program called TrueForm, and filled out via the Macintosh. The software can "learn" placement of items in a frequently used form, performing calculations, and or preset default values. The user simply needs to tab across to each area to fill in an item. The form can be printed out on either an ImageWriter or LaserWriter printer. Available now, the program costs \$495. Said company President Mitch Stein to NEWSBYTES, "Why reinvent the wheel?" He said his product is the only one available which allows the Macintosh to utilize standard and pre-printed forms.

HYPERWARE HYPER-EVIDENT

SAN FRANCISCO (NB) — From new publications to new applications, Apple's HyperCard dominated this year's MacWorld Expo. Here's a partial list of the new products and ideas on display.

*Symmetry Corporation, Mesa, Arizona, exhibited HyperDA, a desk accessory which allows 512K Macs and up to browse HyperCard stacks while using other applications. The desk accessory does not allow the contents of a stack to be changed. Available now, the price is \$69.

*Activision, Mountain View, Ca., unveiled Reports!, a free-form, graphics-oriented report designer complete with drawing tools to place lines, boxes, text, and graphics anywhere on a page. Reports! also supports complex calculations within individual reports, including dates, totals, sub-totals, averages, and counts. The price is set at \$100 when the product is to be released in March.

*Activision also showed City to City, stackware which is a customizable travel guide for 30 U.S. cities and contains information on business services, etc. Available in March, the program is set to cost \$50.

*Cognition Technologies, Cambridge, Ma., has what's considered the first artificial intelligence shell for HyperCard. Called MacSmarts 3.0, the product is both rule-based and example-based and can be used to create expert systems. An end user could then have an "intelligent" stack that would guide him or her to a solution to a problem, be it how to prepare a Christmas dinner, fix a Rolls Royce, or solve the world's problems. The retail price is set to be \$195.

BUILDING BRIDGES TO THE IBM WORLD: DOS ON A MAC

SAN FRANCISCO (NB) — While DEC and Apple are now hard at work improving communications between their machines, others have already produced new products to link IBM and Macintosh PCs. Apple's introduction of AppleShare PC (see NEWSBYTES-WEST) was rivalled by an offering from Tangent Technologies of Norcross, Georgia, which showed TangentShare, software which enables a network of Macs and IBMs to share a network. The product does everything that AppleShare PC does, but not only talks to MS-DOS 3.3 applications but PS/2 computers and software as well. Tangent is pricing its peripheral card and software exactly the same as Apple.

APPLE/DEC FORM STRATEGIC ALLIANCE

SAN FRANCISCO (NB) — On the opening day of MacWorld Expo, Apple and Digital Equipment Corporation laid to rest rumors of an impending alliance by announcing they were true. Apple and DEC plan a joint development effort to integrate Macintoshes and the AppleTalk network with VAX and DECnet/OSI networks. Expected from the alliance is a consistent set of application programming interfaces for developers to write distributed applications and exchange documents. DEC has the second largest installed base of machines, next to IBM, and its contract with Apple, whose Macintosh sales are exploding, creates the biggest threat to IBM's dominance of the computer market in its history. Apple gains new prestige in the corporate market where the Macintosh is finally gaining acceptance. And DEC, which unsuccessfully launched into the small system market with a machine called the Rainbow several years ago, can finally offer a personal computer to its customers.

Analysts suggest the partnership will result in a cross-marketing agreement between the firms and DEC may order as many as one million Macintoshes the first year.

THREE NEW LASER PRINTERS FROM APPLE

SAN FRANCISCO (NB) — Apple has replaced its LaserWriter line with three new models, ranging from an entry-level model at US\$2,800 to a high performance, expandable model at US\$6,600. Apple has also proclaimed that all the printers can be upgraded to either the next highest, or highest performance LaserWriter. The Canon LBP-SX second-generation printing engine, said to produce darker blacks, higher reliability, and longer life span, drives all three models.

The low-end LaserWriter IISC, designed to be used alone with an individual Macintosh, has 1 megabyte of RAM, uses the Motorola 68000 chip, and utilizes the QuickDraw routine, which addresses the Macintosh screen, to print a page. It is not a Postscript printer. However, it comes with several standard fonts: Courier, Helvetica, Symbol, and Times, in point sizes of 9 through 24.

The sample document provided by Apple is remarkable in its definition and clarity and to the naked eye, is virtually indistinguishable from the output of the previous LaserWriter models.

The LaserWriter IINT (the "N" refers to networking) is a Postscript printer, priced at \$4,600, has 1 megabyte of ROM and 2 megabytes of RAM, comes with 35 standard typefaces, and can share input on a network. The high-end LaserWriter IINTX is the first laser printer to run on the Motorola 68020, the brains of the Macintosh II, and is aimed at the high-volume shop. It has all that the IINT has plus three expansion slots for the addition of ROM, RAM (up to 12 megabytes) and SCSI hard drives. It also includes built-in HP LaserJet emulation.

Apple promises to continue to support current owners of LaserWriter and LaserWriter Plus printers.

All three models are expected to be in retail stores by February.

APPLE ALSO UNVEILS MIDI INTERFACE, SHIPS APPLESHARE PC

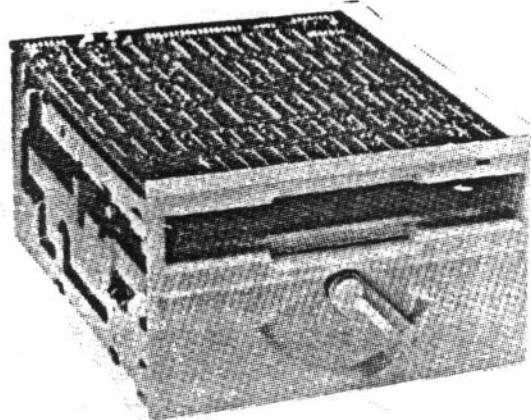
SAN FRANCISCO, Ca. (NB) — Macintoshes can now share data with PCs on an AppleShare network with AppleShare PC, which Apple is finally shipping. The price of AppleShare PC is set at \$149.

Apple rounded out its day of product introductions by unveiling the Apple MIDI Interface for the Apple IIGS and Macintosh. The price is set at \$99 and the product is available now.

By Wendy Woods

O.S.S.

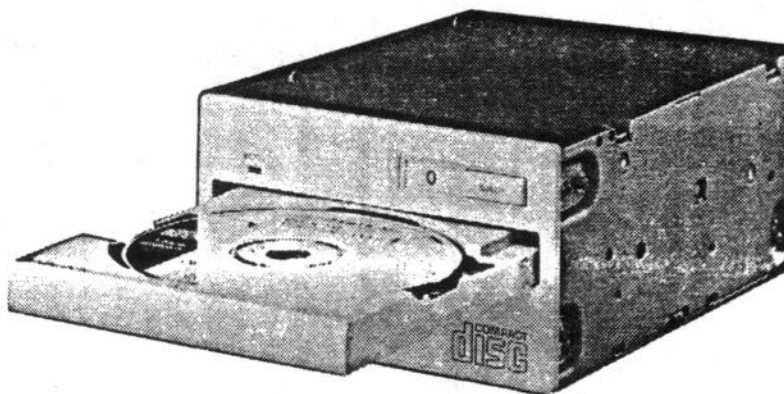
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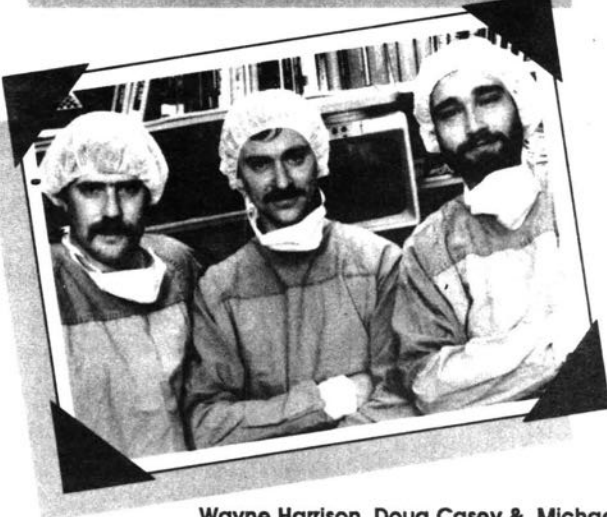
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Computer Calendar

Tue, Feb 2 - Tue, Feb 23	Word Perfect UBC Continuing Education \$185 An introduction 7-9:30 pm Micro Lab, Old Bookstore, UBC 222-3276
Sat, Feb 6 & Sun, Feb 7	Learning About Microcomputers UBC Continuing Education \$185 A lab workshop 10-4 pm Micro Lab, Old Bookstore, UBC 222-3276
Mon, Feb 8 - Mon, Mar 14	Programming in C UBC Continuing Studies \$195 An introduction 7-10 pm Micro Lab, Old Bookstore, UBC 222-3276
Tue, Feb 9 & Thu, Feb 11	Getting Started with Macintosh UBC Continuing Education \$145 An intro to the technology 7-10 pm Rm 121 Comp Science Bldg UBC 222-3276
Wed, Feb 10 - Wed, Mar 2	dBase III Plus UBC Continuing Studies \$195 Getting started 7-9:30 pm Micro Lab, Old Bookstore, UBC 222-3276
Thu, Feb 11 - Thu, Mar 3	Using MS Word UBC Continuing Education \$180 An intro 7-9:30 pm Micro Lab, Old Bookstore, UBC 222-3276
Fri, Feb 12 - Sat, Feb 20	Desktop Publishing UBC Continuing Studies \$85 DTP and the graphic arts studio 10 am - 1 pm Rm G53, Woodward Bldg, UBC 222-3276
Sat, Feb 13	MS-DOS UBC Continuing Education \$65 A beginner's guide 10-2 pm Micro Lab, Old Bookstore, UBC 222-3276
Sat, Feb 13	Information Access UBC Continuing Studies \$50 The new online databases 10-1 pm Lect. Hall 4, Woodward Bldg, UBC 222-3276
Tue, Feb 16 - Tue, Mar 1	Word Processing on the Mac UBC Continuing Studies \$165 Using MS Word 7-10 pm Rm 121 Comp Science Bldg UBC 222-3276
Thu, Feb 18 - Thu, Mar 10	Writing Manuals Successfully UBC Continuing Studies \$150 for the Computer Industry 7:30-9:30 pm Room 201, Wesbrook Bldg, UBC 222-3276
Tues, Feb 16	NewViews Accounting Seminars , TXL Management Systems Free Hotel Georgia, 9-12 am 876-7117
Sat, Feb 20	MS-DOS UBC Continuing Studies \$65 An advanced workshop 10-2 pm Micro Lab, Old Bookstore, UBC 222-3276
Thu, Feb 25 - Thu, Mar 17	Inside the PC UBC Continuing Studies \$85 A technical perspective 7-9 pm Rm 460, Comp Science Bldg, UBC 222-3276
Fri, Feb 26	Using Framework UBC Continuing Studies \$175 using Framework to organize your thinking 9-4 pm Micro Lab, Old Bookstore, UBC 222-3276
Sat, Feb 27	MS-DOS UBC Continuing Studies \$65 A beginner's guide 10-2 pm Micro Lab, Old Bookstore, UBC 222-3276
March 1	Desktop Publishing Behnsen's Graphic Supplies free call for schedule Saturdays 11:30-1 pm 1016 Richards St 681-7351 z
Tues, March 15	NewViews Accounting Seminars , TXL Management Systems Free Hotel Georgia, 9-12 am 876-7117
Sat, Mar 26	Desktop Publishing Tools Simon Fraser \$160 Alternative Approaches SFU Downtown 687-4255
Fri, Apr 8	Desktop Publishing Simon Fraser \$160 A day with Ventura Publisher SFU Downtown 687-4255
Fri, May 6 - Mon, Jun 6	Computers and Publishing Simon Fraser \$195 Specialized or single title publishing SFU Downtown 687-4255

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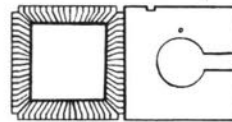
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